

# Order of Draw

The ability to draw multiple tubes from a single venipuncture is accomplished by the use of the VACUTAINER® holder, a multi-sample valve needle and a selection of VACUTAINER® collection tubes. Precautions should be followed when drawing multiple tubes to prevent clotting or contamination.

The recommended “order of draw” when drawing several different tests on a single venipuncture is as follows:

1. Blood Culture Tube or Bottle: Sterile top of blood bottle will be the first thing to touch sterile multi-sample valve.
2. Coagulation-Additive Tube: Blue-top tubes need to be inverted several times to mix anticoagulant with blood. Tube can be mixed while another tube draws.  
**Note:** If coagulation test is the only test ordered, draw a clot tube before blue-top tube to reduce risk of clotting effects.
3. Non-Additive Tube (Red-Top): These tubes have no anticoagulant and can be drawn and set aside without manipulations to them. Draw before any additive tubes so that possible cross-contamination won't occur.  
**Note:** Draw red-top tube before coagulation tube so tissue juices or thromboplastin contamination won't create clotting effect.
4. Other Additive Tube (Green-Top, Lavender-Top, Grey-Top, etc.): These tubes with anticoagulant need to be inverted several times to mix anticoagulant with blood. Tube can be mixed immediately after needle is removed from patient's arm. Any possible cross-contamination of the different additive-containing tubes will not affect test results if collected in preferred order of draw below.

Recommended “order of draw” for blood tubes:

1. Blood culture tubes
2. Light blue-top (sodium citrate) coagulation tubes
3. Red-top, gold-top, speckled-top (serum tubes with or without clot activator, with or without gel separator)
4. Green-top (heparin) tubes with or without gel
5. Lavender-top (EDTA) CBC tubes
6. Grey-top (potassium oxalate/sodium fluoride) glycolytic inhibitor tubes

**Important:** Any and all additive tubes should be mixed by gentle inversion 5 or 6 times soon after they are drawn since anticoagulant must be completely and evenly distributed throughout tube to contact the blood to prevent it from clotting. The fact that tube contains anticoagulant is no assurance that it

will prevent blood from clotting unless it is given a chance to interact with blood before the natural clotting functions start their reaction.

Shaking of any tube to mix it will only run the risk of improperly spreading additives as well as physically damaging red blood cells with the effect of causing hemolysis. **Tubes for platelet aggregation should never be sent through the tube system, because the agitation of the blood could activate the platelets.** Recollection is the consequence.

When blood is drawn with a syringe instead of a VACUTAINER® system, the extra time blood has remained in syringe means that the specimen should be placed in additive tubes first before non-additive tubes.